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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,007	12/30/2003	Reinhold Kautzleben	6570P047	9317

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EXAMINER	
NOONAN, WILLOW W	

ART UNIT	PAPER NUMBER
2446	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/750,007	KAUTZLEBEN, REINHOLD	
	Examiner	Art Unit	
	Willow Noonan	2446	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 March 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,12-19 and 22-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,12-19,22-29* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/18/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The instant application having Application No. 10/750,007 has a total of 24 claims pending in the application; there are 3 independent claims and 21 dependent claims, all of which are ready for examination by the Examiner. There are 10 amended claims and 7 cancelled claims.

Response to Arguments

2. Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-3, 6-14, 17-24, and 27-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Jung** (U.S. Patent No. 6,308,208) in view of **Renaud** (U.S. Patent App. Pub. No. 2003/0069969) (hereafter **'969**), further in view of **Java™ Management Extensions Instrumentation and Agent Specification, v1.0** (hereafter **JMX**), and further in view of **Renaud** (U.S. Patent App. Pub. No. 2003/0061247) (hereafter **'247**).

Regarding claims 1, 12, and 22, Jung teaches a monitoring system comprising a cluster of application servers communicatively coupled on a network to server applications over the network to a plurality of clients, *see* Jung at col. 1, lines 5-10 ("implementing a monitoring task across distributed computer resources in the environment"), each of the application servers comprising server nodes, *see* Jung at col. 2, lines 17-24 ("As a concrete example, a cell representing a database server resource is an observer of cells representing disk drives, operating systems, and application processes. Thus, the database server may be construed as a "master" resource comprising a set of computing resources (e.g., disk drives, operating system and application processes) whose individual states may impact the state of the master resource."). Jung further teaches a plurality of management servers associated with the server nodes of the application servers. *See* Jung at col. 2, line 65 – col. 3, line 2 ("Each cell is associated with a respective one of a set of given computing resources"). Jung teaches a plurality of runtime monitors arranged in a hierarchical monitor tree having a plurality of nodes, wherein each runtime monitor is represented as a node of the monitor tree. *See* Jung at col. 8, lines 32-40 ("As monitor values change across the lower level cells, such changes get propagated automatically (e.g., as events) to the higher level cell, which includes its own monitor. This architecture advantageously creates a hierarchical buildup of derived data wherein values in the monitoring cell are dependent on values below in the hierarchy.").

Jung teaches that the runtime monitors are associated with specified resources on each of the server nodes, each runtime monitor registered with at least one of the

individual management servers, each of the runtime monitors collecting and reporting monitoring data for its associated resource. *See* Jung at col. 6, line 65 – col. 7, line 5 (describing how the each monitoring agent is responsible for monitoring the resources in its cell). Jung further teaches notification logic to generate notification in response to certain specified events associated with certain resources of certain monitors, the notification logic distributing the notifications across all, or a subset of, the server nodes of the cluster. *See* Jung at fig. 7 (illustrating the process of propagating state changes to other server nodes).

Jung does not teach that the monitor server is an MBean server comprising a plurality of monitor MBeans generated by a monitor service. However, '969 teaches that it is well known to use monitor MBeans mapped to MBean servers. *See* '969 at p. 4, paragraph 43 ("MBean Server 345 directly controls the MBeans located on Server Program 342. These MBeans correspond to management resources for applications on Server program 342 as well as management resources for Server program 342 itself. MBean Server 345 provides access to MBeans through the generic JMX interface"). '969 further teaches that the monitor MBeans may be registered with a MBean server. *See id.* at p. 2, paragraphs 12-13 ("Each MBean represents a different manageable resource. Examples of manageable resources may include an implementation of a service, an application, or a device. . . . MBeans 105, 110, 115 are registered with MBean Server 130."). It would have been obvious to one of ordinary skill to use '969's technique in Jung's system, because '969 teaches that the disclosed invention provides

an intuitive, easy-to-use system for managing resources. *See generally* '969 at p. 2, paragraph 21.

Modified Jung does not teach resource MBeans mapped to monitor MBeans within the monitor tree to establish a link between each of the monitor MBeans and its uniquely identified corresponding resource such that each monitor MBean receives monitoring data relating to its corresponding resource from its associated resource MBean. However, JMX teaches that it is well known to use monitor MBeans to observe attribute values in other MBeans and emit notifications of threshold events. *See* JMX at p. 133 ("monitor MBeans which allow you to observe the variation over time of attribute values in other MBeans and emit notifications at threshold events. As a whole they are referred to as the monitoring services."). It would have been obvious to one of ordinary skill to use JMX's monitoring MBean technique in Jung's monitoring system because JMX teaches that the disclosed technique is useful for comprehensive application and network management. *See generally* JMX at p. 17.

Modified Jung does not teach that the monitor MBeans are installed by a central monitor service based on monitor configuration data at a central database. However, '247 does teach that monitor MBeans may be installed by a central server based on configuration information stored in a database. *See* '247 at p. 6, paragraph 54 ("During deployment of an application or application component, the Admin Server 225 searches for an MBean representing the currently selected file. In an embodiment, this search is conducted through a JNDI compliant naming service. If the Admin Server 225 finds a MBean for the file associated with the application or application component, then the

application or application component is deployed on the application servers specified by the MBean."). It would have been obvious to one of ordinary skill to use '247's technique with the teachings of modified Jung because '247 teaches that the disclosed invention may be used to streamline the process of application deployment by automatically deploying applications in a distributed computing environment. *See generally id.* at p. 2, paragraphs 15-16.

Regarding claims 2, 13, and 23, Jung teaches that each server node is assigned a dedicated MBean server. *See* Jung at fig. 5.

Regarding claims 3, 14, and 24, Jung teaches a dispatcher node configured within each application server to distribute client requests to each of the server nodes. *See* Jung at col. 6, lines 35-43 ("the dispatch mechanism compiles the appropriate Java class files (preferably based on the task or some characteristic thereof) and dispatches the applet (as the software agent) in the network. An applet is then executed on the JVM located at a receiving node"). Jung teaches that the dispatcher has a dedicated MBean server associated therewith to monitor resources within the dispatcher wherein MBeans associated with the resources generate notifications via the notification logic in response to specified events. *See* Jung at fig. 5; Jung at fig. 8 (illustrating that the single high-level master resource has an associated monitoring cell); Jung at col.7-8 ("Thus, the cellular automaton includes a control mechanism for propagating changes in the attributes of any cell to all observers of that cell … [effecting] automated distributed monitoring in a large distributed computing environment")

Regarding claims 6, 17, and 27, Jung teaches that among the attributes monitored in a cell are the individual *states* of constituent resources. *See* Jung at col. 2, lines 20-24.

Regarding claims 7, 18, and 28, Jung teaches a graphical visual administration interface configured to generate graphical images representing the notification. *See* Jung at col. 8, lines 50-67 ("changes to those cells are then propagated to operator consoles, which preferably use visual user interface techniques to provide an operator with a dynamic view of the state of selected resources in the network").

Regarding claims 8, 19, and 29, Jung teaches that the application servers comprise Java enterprise servers and wherein the notification logic comprises a notification service executed on one or more of the Java enterprise servers. *See* Jung at col. 6, lines 22-43.

Regarding claims 9, 20, and 30, Jung teach that each MBean reports MBean notifications to the notification logic through its respective MBean server. *See* Jung at col. 8, lines 37-39 ("As monitor values change across the lower level cells, such changes get propagated automatically (e.g., as events) to the higher level cell, which includes its own monitor").

Regarding claims 10, 21, and 31, Jung teaches a central database to store monitor configuration data defining the resources to be monitored and the events to generate the notifications. *See* Jung at col. 6, lines 1-7 ("Manager preferably also includes a database including information identifying a list of all machines in the distributed computing environment that are designed to be managed").

Regarding claim 11, Jung teaches connector associated with each MBean server to communicatively couple each MBean server to the notification logic. *See* Jung at col. 8, lines 6-8 ("Resulting state changes are in turn propagated through the automaton by the control mechanism 55 as previously described. The control mechanism is preferably implemented in each software agent").

5. Claims 4-5, 15-16, and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Jung** in view of **'969**, further in view of **JMX**, further in view of **'247**, and further in view of **Tsun** (U.S. Patent App. Pub. No. 2004/0148610).

Regarding claims 4, 15, and 25, modified Jung teaches the limitations of claims 1, 12, and 22. *Supra.* Modified Jung does not teach that one of the specified events comprises a value associated with a resource reaching a first threshold value. Tsun does teach it is well known to use threshold triggers in network elements. *See* Tsun at p. 5, paragraph 46 ("threshold normal values"). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Tsun's thresholds in Jung's system because Tsun teaches that the disclosed technique allows tasks to be automatically monitored and reset if not functioning properly, simplifying the administration of complex distributed systems. *See generally* Tsun at p. 1, paragraphs 7-8.

Regarding claims 5, 16, and 26, modified Jung does not teach that one of the specified events comprises the value associated with the resource reaching a second threshold value, the second threshold value representing a critical resource value. Tsun

does teach it is well known to use second critical threshold trigger. *See* Tsun at p. 5, paragraph 46 ("threshold critical values").

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Willow Noonan whose telephone number is (571)270-1322. The examiner can normally be reached on Monday through Friday, 7:30 AM-5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Pwu can be reached on (571) 272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Willow Noonan/
Examiner, Art Unit 2446

/Jeffrey Pwu/
Supervisory Patent Examiner, Art Unit 2446